

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:	§	Examiner: Joo, Joshua
Bernard A. Traversat, et al.	§	
	§	
	§	Group Art Unit: 2154
Serial No. 10/055,650	§	
	§	Atty. Dkt. No.: 5681-07400
Filed: January 22, 2002	§	
	§	
For: Reliable Peer-to-Peer	§	
Connections	§	
	§	

REPLY BRIEF

Mail Stop Appeal Brief - Patents

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir/Madam:

This brief is in reply to the Examiner's Answer mailed November 13, 2008. Appellants respectfully request that this Reply Brief be entered pursuant to 37 C.F.R. § 41.41 and considered by the Board of Patent Appeals and Interferences.

REPLY

Appellants respectfully traverse the rejections for at least the reasons given in the Appeal Brief and the following reasons. Different groups of claims are addressed under their respective subheadings. Appellants' arguments from the Appeal Brief filed August 25, 2008 regarding the rejections are herein incorporated by reference.

First ground of rejection:

The Examiner rejected claims 1-3, 5-7, 11-15, 18, 21, 22, 25-27, 29-31, 35-40, 43, 45-47, 49-51, 55-60 and 63 under 35 U.S.C. § 103(a) as being unpatentable over Davis in view of Dreke and Black. Appellants traverse this rejection for at least the following reasons.

Claims 1, 2, 11, 15, 18, 21, 22, 25, 26, 35, 39, 40, 43, 45, 46, 55, 59, 60, and 63:

1. **The cited art clearly fails to teach or suggest *wherein said establishing, said transmitting, said receiving, and said retransmitting are performed according to at least one of the one or more peer-to-peer platform protocols and wherein said peer-to-peer platform protocols are distinct from the at least one network transport protocols, as recited in claim 1.***

As discussed in Appellants' previous Responses and Appeal Brief, the system disclosed in Davis is explicitly directed to network transport layers and network transport protocols. In fact, many of the passages cited by the Examiner, including those in columns 5 and 9 explicitly describe network transport protocols. For example, column 5, lines 40-44 states, "More specifically, the present invention provides several protocols for controlling data packets at the transport layer or other packet transmission layer" (emphasis added). In other words, the protocols taught by Davis are explicitly described as being implemented using network transport protocols. Therefore, Davis explicitly does not suggest that said establishing, said transmitting, said receiving, and said

retransmitting are performed according to at least one of the one or more peer-to-peer platform protocols and wherein said peer-to-peer platform protocols are distinct from the at least one network transport protocols, as recited in claim 1.

The Examiner previously submitted that Black teaches implementing a messaging system that is independent of transport protocols, in column 10, lines 63-67. However, there is nothing in Black that describes the “message format” and “safe movement protocol” as peer-to-peer platform protocols, or anything about a peer computing system, at all. Therefore, having a “message format” and a “safe movement protocol” that are transport layer independent in a system that does not support peer-to-peer platform protocols (such as the system of Black) clearly does not teach or suggest that peer-to-peer platform protocols, such as the specific peer-to-peer platform protocols recited in claim 1, should be transport layer independent. None of the cited references include such protocols, and the system of Davis is specifically directed to network transport protocols (e.g., ACP).

The Examiner has asserted that “Black teaches of a system for a messaging protocol between devices that is independent, i.e., distinct from a network transport protocol.” However, Black does not pertain to peer-to-peer platform protocols as recited in claim 1. Therefore, the combination of references cannot teach that such protocols are (or would benefit from being) distinct from network transport protocols.

In the Examiner’s Answer, p. 22, the Examiner again admits that Davis and Dreke do not teach peer-to-peer protocols that are distinct from network transport protocols and relies on Black to teach this limitation. **However, Black does not pertain to peer-to-peer protocols and the protocols of Davis are specific to the transport layer**. Since Black does not pertain to peer-to-peer protocols, one of ordinary skill in the art would have no reason to apply Black’s teachings in the manner proposed by the Examiner. The Examiner’s reasoning can be found only in hindsight and is not supported by any actual evidence of record. Moreover, since Davis’s protocols are specific to the transport layer, to make such protocols distinct from a network transport protocol is

nonsensical and counter to the intended purpose of Davis's teachings. "If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). "If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). Since the Examiner's proposed modification is counter to the intended purpose and operation of Davis, the Examiner's proposed combination is improper. The Examiner's assertion that one of ordinary skill in the art would modify Davis' teachings for the protocols to be implemented independent of network transport protocols as taught by Black are nonsensical, since Davis' teachings are directed to those very network transport protocols themselves.

2. The cited art clearly fails to teach or suggest *wherein the plurality of peer nodes is configured to implement a peer-to-peer environment on the network according to a peer-to-peer platform comprising one or more peer-to-peer platform protocols, as recited in claim 1.*

The Examiner previously cited Davis column 8, lines 21-24 as teaching the peer-to-peer platform protocols of claim 1. However, as noted in Appellants' previous Response and Appeal Brief, this passage merely states that a given computer "may also function as a peer in a peer-to-peer network" without describing any of the specific limitations of a peer-to-peer platform recited in the claims or mentioning one or more peer-to-peer platform protocols, as in claim 1. A computer may "function as a peer in a peer-to-peer network" without necessarily including a peer-to-peer platform comprising any of the specific peer-to-peer platform protocols recited in claim 1, and without meeting the additional limitations recited therein regarding their distinction from transport protocols. None of the cited passages, or anything else in Davis, describes peer-to-peer platform protocols of a peer-to-peer platform that meet the limitations of

Appellants' claims and Davis teaches the use of protocols such as TCP, UDP, SPX, IP, IPX and ATM, all of which are explicitly described as being network transport protocols.

Davis, Dreke, and Black do not describe the particular peer-to-peer platform protocols recited in claim 1. For example, these references fail to teach or suggest any peer-to-peer platform protocols for enabling peers to discover each other, *wherein to discover comprises obtaining an address for each discovered peer node*. The Examiner's cited passage in Dreke, for example, describes three client computers establishing a connection through an Internet Presence Information Server (IPIS). Dreke describes a mechanism to establish a connection between two known peers, in which locating the peers and establishing the connection are managed by the IPIS server. **By definition**, the centralized IPIS sever mechanism of Dreke does not involve a peer-to-peer platform protocol for enabling peer nodes **to discover each other**. Appellants further noted that there are many ways (such as that described in Dreke) that a device may obtain an address for another device that do not involve a peer-to-peer platform protocol, much less one that is distinct from network transport protocols. The cited references, whether considered singly or combination, clearly do not describe the peer-to-peer platform protocol for enabling peer nodes to discover each other, according to the limitations of claim 1.

In the Examiner's Answer, pp. 22-24, the Examiner essentially repeats his same arguments, which are rebutted above.

3. The Examiner has not provided a proper reason to combine the references.

The Examiner previously submitted that it would have been obvious to one of ordinary skill in the art to implement the peer-to-peer platform protocols as taught by Davis as protocol independent of transport protocols as taught by Black, which would improve Davis' teachings by allowing the peer-to-peer protocol including said steps as taught by Davis to be implemented regardless of the transport protocols and provide

reliable data transmission for different transport protocols. The Examiner's stated reason for combining the references is unsupported by the cited art. As discussed above, Davis is directed to techniques to provide an efficient and reliable network transport layer, i.e., to network transport protocols. Therefore, it does not make sense to implement the teachings of Davis independent of such transport protocols, nor is it clear if or how this could be accomplished. The protocols taught by Davis are explicitly described as being implemented using network transport protocols. Therefore, the modification suggested by the Examiner would change the principle of operation of the system of Davis. Appellants note "If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

The Examiner later asserted that it would have been obvious to one of ordinary skill in the art to modify Davis' teachings for the protocols to be implemented as a messaging protocol independent of the network transport protocol as taught by Black, which would allow Davis' protocols to operate on different transport protocols. **Appellants again assert that this argument is nonsensical, since Davis' teachings are directed to the very network transport protocols themselves.**

In the Examiner's Answer, pp. 24-25, the Examiner disagrees, stating, "Examiner contends that performing well known techniques in one type of protocol in a different protocol is not novel... Therefore, although the peer-to-peer protocol as taught by the suggested system of Davis and Dreke may involve the use of the transport protocol, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the peer-to-peer network protocol as taught by the suggested system to be implemented as a messaging protocol that is distinct from network transport protocols as taught by Black, which would similarly improve the suggested system by allowing the suggested peer-to-peer protocols to operate on different transport protocols (See Black, column 10, lines 64-67). However, Appellants' claim 1 does not recite merely "performing well known techniques in one type of protocol in a

different protocol.” The Examiner is failing to consider the claim as a whole. Appellants again assert that the suggested system of Davis and Dreke does not merely “involve the use of the transport protocol,” as the Examiner suggests. Instead, Davis is explicitly directed to protocols at the network transport level. Therefore, a combined system of Davis and Dreke must necessarily include the use of these protocols. Appellants assert that if the combined system of Davis and Dreke did not include these protocols, but instead were independent of these protocols, there would be no combination of the teachings of Davis and Dreke. In other words, there would be no reason to include the specific transport protocols taught by Davis in a system that is independent of such transport protocols. The Examiner further submits that the combination of references “would achieve the predictable result of enabling the peer-to-peer protocols of Davis and Dreke to support different transport protocols and not be limited to a single transport protocol.” This reasoning does not correspond to what is actually recited in Appellants’ claim. **Moreover, it cannot be said to be predictable to combine the teachings of Davis, which is directed to specific transport protocols, in a system that is independent of such protocols.**

Appellants assert that, as shown above, there is no doubt that the cited art does not teach or suggest all limitations of the claim 1, nor has the Examiner provided a sufficient reason to combine the references.

For at least the reasons above, the rejection of claim 1 is not supported by the cited art and removal thereof is respectfully requested. Independent claims 25 and 45 include limitations similar to the above-referenced limitations of claim 1 and were rejected for similar reasons. Therefore, the arguments presented above apply with equal force to these claims, as well.

Dependent claims 3, 5, 6, 27, 29, 30, 47, 49, and 50:

1. The cited art clearly fails to teach or suggest *wherein the other peer node is configured to receive the transmitted messages, and after receiving M*

messages, transmit the acknowledgement to the peer node indicating that the M messages have been received, wherein M is a positive integer less than or equal to N, as recited in claim 3.

The Examiner has submitted that Davis teaches these limitations. The Examiner's first citation describes that a send window size may be increased by the number of packets acknowledged by a received ACK. The Examiner's second passage describes only that a receiving endnode may not necessarily send one acknowledgement packet for each received packet. Neither of these passages describes transmission of an acknowledgement indicating that M messages have been received. Instead, they describe only that an acknowledgement may not be sent after each packet is received. In other passages in Davis, it appears that only the most recently received packet, or the most recently received packet in sequential order, is acknowledged, and nothing describes that it includes an indication of a plurality of messages, as required by claim 3.

In his Answer, the Examiner cites various passages of Davis as teaching sending an ACK that indicates the number of packets (M) acknowledged. One of these passages (column 30, lines 65-67) states, "the sender 32 attempts to increase the send window size by the number of packets acknowledged by the ACK which it just received." The Examiner contends that this passage teaches an ACK that indicates the number of packets received. Appellants disagree. In the system of Davis, the sending node determines the number of packets for the acknowledge update event. Therefore, there would be no need to include such an indication in the ACK itself, and no such indication is described. An additional passage cited by the Examiner describes that an ACK may include multiple ACKs (e.g., one for each received packet). Again, there is nothing in Davis that describes that this bundled ACK includes **an indication of the number of packets** acknowledged by the bundled ACK.

For at least the reasons above, the rejection of claim 3 is unsupported by the cited art and removal thereof is respectfully requested.

Claims 27 and 47 include limitations similar to those discussed above regarding claim 3. Therefore, the arguments presented above apply with equal force to this claim, as well.

Dependent claims 7, 31, and 51:

1. The cited art clearly fails to teach or suggest *wherein the shifted window includes one or more messages previously transmitted to the other peer node and one or more messages not previously transmitted to the other peer node, as recited in claim 7.*

Appellants previously noted that the Examiner's citation in column 30, lines 1-8 was incorrect. Appellants have also asserted that there is nothing in the Examiner's second passage (column 29, lines 51-60) that describes a shifted window including one or more messages previously transmitted and one or more messages not previously transmitted, as the Examiner suggests.

In his Answer, the Examiner corrects his previous citation, instead citing column 31, lines 1-8 as teaching these limitations. This passage describes that if a packet is lost and the sender retransmits the packet, the sender may decrease the send window size. The Examiner also includes references to other passages that describe changing the send window size. However, claim 7 does not recite changing the send window size, but instead recites that a shifted window (one shifted by the current receiving window size and having the same size as the current receiving window size) includes one or more messages previously transmitted to the other peer node and one or more messages not previously transmitted to the other peer node. The Examiner's assertion that a retransmission of a lost data packet in a reduced window size would necessarily include both messages that had been previously transmitted and messages that had not been transmitted are unsupported by the cited art and are merely speculative, based on a single example contrived by the Examiner. **Appellants assert that none of the cited passages teaches this limitation of claim 7.**

For at least the reasons above, the rejection of claim 7 is unsupported by the cited art and removal thereof is respectfully requested.

Claims 31 and 51 include limitations similar to those discussed above regarding claim 7. Therefore, the arguments presented above apply with equal force to this claim, as well.

Dependent claims 12-14, 36-38, and 56-58:

1. The cited art clearly fails to teach or suggest *wherein the peer node and the other peer node are further configured to: monitor reception and retransmission of the messages to determine reliability of the communications channel on the network; and adjust the values of M and N according to said reliability of the communications channel, as recited in claim 12.*

The Examiner previously submitted that Davis teaches these limitations in column 30, lines 65-67, column 32, lines 15-29, and column 31, lines 1-3. However, these passages describe adjusting the send window size dependent on acknowledgments received, and on throughput measurements. There is nothing in Davis that describes determining reliability of a communications channel, as recited in claim 12, or adjusting send or receive window sizes according to such a determination.

In his Answer, the Examiner cites various passages of Davis (including those previously cited) as teaching the limitations of claim 12. However, as noted above, these passages describe adjusting the send window size and/or the acknowledge update event value based on throughput or congestion. The Examiner submits, “by determining whether or not packets are successfully transmitted to the receiving endnode, the sending endnode is determining reliability of the network, and the increasing or decreasing of the window is based on the reliability.” Appellants disagree with the Examiner’s interpretation. Appellants assert that adjusting window sizes based on throughput or

congestion does not necessarily involve, or result in, a determination of the reliability of the communications channel itself. Furthermore, nothing in Davis describes monitoring retransmission of messages, as recited in claim 12.

For at least the reasons above, the rejection of claim 12 is unsupported by the cited art and removal thereof is respectfully requested.

Claims 36 and 56 include limitations similar to those discussed above regarding claim 12. Therefore, the arguments presented above apply with equal force to this claim, as well.

Claims 13-14, 37-38, and 57-58 include further limitations on the adjustment of send and receive window sizes dependent on the determined reliability of an communications channel. Since the cited art does not teach or suggest such a determination, it clearly does not teach or suggest these further limitations.

In his Answer, the Examiner merely cites the same passages as those cited in remarks directed to claim 12. Appellants assert that these passages do not teach or suggest the limitations of claims 13-14, 37-38, and 57-58 for at least the reasons presented above regarding claim 12.

Second ground of rejection:

The Examiner rejected claims 4, 8-10, 28, 32-34, 48 and 52-54 as being unpatentable over Davis, Dreke and Black in view of Barker. Appellants traverse this rejection for at least the following reasons.

Dependent claims 4, 28, and 48:

1. The cited art clearly fails to teach or suggest *wherein N is a positive even integer, and wherein M is equal to $N/2$* , as recited in claim 4.

The Examiner has admitted that Davis and Barker do not explicitly teach this limitation. The examiner has previously cited Barker as teaching receiving a certain number of messages before sending an acknowledgement. The Examiner submits that since Barker teaches transmitting an acknowledgement after a certain number of messages, “it would have been obvious to one of ordinary skill for the receiver endnode to transmit an acknowledgement after other numbers of messages including $N/2$ messages.”

Appellants have asserted that The Examiner’s reason is not supported by any evidence of record and is thus found only in hindsight. **There is nothing in the evidence of record teaching or suggesting any reason (or benefit) for the number of messages to have the specific limitation recited in claim 4, wherein M is equal to $N/2$.** In fact, by stating that any other number of messages may be transmitted, the Examiner acknowledges that there is no particular benefit to any of the particular numbers.

In his Answer, the Examiner submits, “it would have been obvious to one of ordinary skill in the art that the certain number of messages (M) to trigger sending of acknowledgement may correspond to $N/2$ if changing network conditions causes such a correspondence, such that the correspondence allows optimum transmission of packets.” **Appellants again assert that the Examiner’s remarks are not supported by the evidence of record and amount to nothing but speculation based on hindsight.** Nothing in the evidence of record teaches or suggests this specific relationship between M and N for optimum transmission of packets.

For at least the reasons above, the rejection of claim 4 is unsupported by the cited art and removal thereof is respectfully requested.

Claims 28 and 48 include limitations similar to those discussed above regarding claim 4. Therefore, the arguments presented above apply with equal force to this claim, as well.

Dependent claims 8, 32, and 52:

Appellants traverse the rejection of these claims for at least the reasons presented above regarding the claims from which they depend.

Dependent claims 9, 10, 33, 34, 53, and 54:

1. The cited art clearly fails to teach or suggest *wherein the other peer node is configured to: continue receiving the transmitted messages until the first M messages in the sequence of N transmitted messages as indicated by the sequence numbers are received... wherein M is a positive integer less than N, as recited in claim 9.*

The Examiner submits that Davis teaches this limitation, citing column 6, lines 63-67 and column 73, lines 44-47. These passages describe acknowledging receipt of a plurality of packets, but do not teach or suggest anything about continuing to receive packets until a particular number of packets are received as indicated by the sequence numbers, as required by claim 9.

In his Answer, the Examiner cites various passages of Davis as teaching that the receiving endnode receives a certain number of packets or a packet count specified by a sending endnode that triggers the sending of an acknowledgment. Appellants assert that Davis does not teach or suggest the use of sequence numbers in determining whether to continue receiving transmitted packets. Appellants assert that none of the cited passages, or anything else in the evidence of record, teaches or suggests that the receiving node continuing to receive transmitted messages until the first M messages are received as indicated by the sequence numbers. Appellants note that the Examiner has not addressed this limitation of the claim.

For at least the reasons above, the rejection of claim 9 is unsupported by the cited art and removal thereof is respectfully requested.

Claims 33 and 53 include limitations similar to those discussed above regarding claim 9. Therefore, the arguments presented above apply with equal force to this claim, as well.

Third ground of rejection:

The Examiner rejected claims 16 and 17 as being unpatentable over Davis, Dreke and Black in view of Ivanoff. Appellants traverse this rejection for at least the reasons presented above regarding the claim from which these claims depend.

Fourth ground of rejection:

The Examiner rejected claims 19, 20, 41, 42, 61 and 62 as being unpatentable over Davis, Dreke and Black in view of Antur. Appellants traverse this rejection for at least the reasons presented above regarding the claims from which these claims depend.

Fifth ground of rejection:

The Examiner rejected claims 23, 24, 44 and 64 as being unpatentable over Davis, Dreke and Black in view of Zhu. Appellants previously noted that the Examiner cited U.S. Patent No. 5,768,557, which is not a patent issued to an inventor “Zhu.” **In his Answer**, the Examiner changes his citation as a reference to U.S. Patent No. 5,768,527. Appellants assert that this change in the rejection at this late time without designating the rejection as a new ground of rejection is impermissible. Appellants also traverse this rejection for at least the reasons presented above regarding the claims from which these claims depend.

CONCLUSION

For the foregoing reasons, it is submitted that the Examiner's rejection of claims 1-64 was erroneous, and reversal of his decision is respectfully requested.

The Commissioner is authorized to charge any fees that may be due to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5681-07400/RCK.

Respectfully submitted,

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